Constrained Maximum Likelihood 2.0 Update - Now Available!

The GAUSS Constrained Maximum Likelihood Module Contains:

- **Optimization methods for efficiently estimating the parameters of maximum likelihood models with general constraints on the parameters. These methods include BFGS, DFP, Newton, BHHH, PCRG, and steepest descent methods.**
- **Methods for statistical inference. Methods include Wald, Quasi-maximum likelihood, profile likelihood, bootstrap, and Bayesian using the weighted likelihood bootstrap method.**
- **Built-in models for estimating limited dependent variable models. These include exponential, exponential gamma, Pareto duration (with or without censoring), Poisson, truncated Poisson, hurdle Poisson seemingly unrelated regression Poisson, and latent variable Poisson models.**
- **Examples that include Tobit, nonlinear curve fitting, simultaneous equations, nonlinear simultaneous equations, and factor analysis models.**

New Features & Enhancements

SPEED: New Fast Procedures

The new Constrained Maximum Likelihood procedures are designed for speed. Depending on the type of problem, FASTCML, FASTCMLBoot, FASTCMLBayes, FASTCMLProfile and FASTCMLPflClimits are from 10 to 180 percent faster than their predecessors.

With the new FAST procedures, the data must be completely storable in RAM; no keyboard input is allowed during the iterations; and iteration information is not printed to the screen.

New Random Numbers

The new "Kiss-Monster" random number generator that comes with GAUSS 3.6 is now used in CML bootstrap procedures and the random line search algorithm. This generator has a period of New Multiple Point Numerical Gradients

New Multiple Point Numerical Gradients

Accuracy is improved by adding points to the usual numerical gradient calculation. Greater accuracy is achieved with more points.

GAUSS™

New Grid Search Method

CML does a grid search when all other convergence methods fail. In most cases convergence is eventually achieved.

New Trust Region Method

The solution direction at each iteration is constrained to an interval. This prevents poor start values from pushing current estimates into regions that are too distant. It also aids in resisting convergence at saddle points.

Requirements: Requires GAUSS version 3.6.

Platforms: Available for GAUSS For Windows, LINUX and UNIX.

Contact your local dealer for pricing and information :

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